

**HEADQUARTERS
AMO BALLISTIC MISSILES CENTER
UNITED STATES AIR FORCE
Air Force Unit Post Office
Los Angeles 45, California**

REPLY TO
ATTN OF

LBZJ/2712

17 December 1959

SUBJECT: Weekly Diary - 11 thru 17 December 1959

TO: LEG

Satellite Systems

1. Space For 6594th Test Wing: (UNCL)

The problem of finding space for Air Force personnel at or near the Lockheed Sunnyvale facility has been a continuing one which does not lend itself to ready solution. A short range solution has been reached which will permit the contractor to furnish space and necessary support to the Wing under the supplies contract. The long range aspect of this problem is still under study by BMD.

2. Negotiations For Definitization Of SAMOS, MIDAS and DISCOVERER Programs: (UNCL)

Preliminary cost discussions with the contractor have been completed on the DISCOVERER program. These discussions will also be completed by the end of this week with respect to the MIDAS program. It is expected that cost discussions will commence for SAMOS approximately 4 January. The objective of these discussions is to definitize all portions of Letter Contract AF 04(647)-347 except that relating to the Communication and Control System. A definitive cost proposal for the Communication and Control System is not expected from Lockheed before 1 February 1960.

3. Engineered Magnetics Static Inverter Failure on Satellite Systems Program: (UNCL)

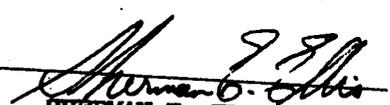
Members of WDN and LBZJR visited Engineered Magnetics on 16 Dec 59. The purpose of this visit was to realize detailed information on the cause of inverter failures and, in so doing, generate helpful suggestions to Engineered Magnetics on the corrective aspects of the problem. It was decided that Engineered Magnetics would institute a system of inspection check points designed to produce closer quality controls. Other suggestions taken under advisement by Engineered Magnetics management included refinement of their job planning and improving personnel morale. It is noted that LMSD has furnished a load limiter to Engineered Magnetics, the purpose being to conduct compatibility testing of the load limiter and inverter.

4. Loan of Weston Collant Quantity Indicators and CO2 Indicators to LMSD by McDonnell Aircraft Corp., St. Louis, Missouri: (UNCL)

This office arranged a loan of the above equipment to LMSD on a 60 day basis from the Mercury program, being processed by McDonnell Aircraft. The indicators are urgently required by LMSD in support of Satellite Systems Testing. It is noted that the Mercury program is under the auspices of the Bureau of Weapons and is also a DX rated program.

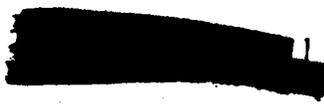
5. Spares Procurement: (UNCL)

The Satellite Systems Preliminary Spares List was submitted by LMSD on 14 Dec 59. This list contained spares for SAMOS, MIDAS and DISCOVERER programs, with common spares for all three segregated by costs and requirements. The list is in the process of being reviewed in house and will be further reviewed with LMSD personnel. One of the primary objectives of the review will be to effect a possible reduction in the quantitative requirements for Hi Value items. It is intended to negotiate spares separately at the completion of the basic program negotiations.


SHERMAN E. ELLIS
Colonel, USAF
Director, Space & Satellites

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WEEKLY DIARY ITEMS - IBZSP

10 Dec 1959 Thru 16 Dec 59

(U) Douglas Aircraft Company, Inc.

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1. Contract No. AF 04(645)-65

a. Letter Contracts - Supplemental Agreement No. 52 (definitized Letter Contract Designated SA No. 15) for supplies and services in support of the WS 117L Program at an increase of \$8,887,066, was manually approved at Hq AMC and was distributed. Supplemental Agreement No. 58 (definitizes Amendment No. 3 to Letter Contract No. 26) for THOR Booster Modifications has been initially approved and will be forwarded to the Contractor for execution on 17 December 1959. Supplemental Agreement No. 59 (definitizing Letter Contract Designated as SA No. 41) for the WS 115A Interim Unit Proficiency System was forwarded to the Contractor for execution on 14 December 1959. When these documents are finally executed there will remain four outstanding letter contracts (SA's) under Contract AF 04(645)-65. Negotiations are scheduled to begin on or about 22 December 1959 on three of these.

b. Modification of Launch Stand 17B AFMTC. As a result of the AF-ARPA-NASA meeting held in Washington on 9-11 December 1959, a CCN is being issued against Contract AF 04(645)-65 to expedite the stand modification.

(U) Specialized Training Course

A five-day Specialized Training Course on Improvement Curve Analysis Techniques is presently being conducted at AFMTC by Harbridge House, Inc., Encino, California under Contract AF 04(647)-525 negotiated by IBZSP. Sixteen BMC Staff members and senior buyers are attending the course.

(U) Planning Research Corporation

The additional work required by BMD under Contract AF 04(647)-372 on the Study of Missile Mobility has been negotiated for a fixed price of \$4,390 and a Supplemental Agreement will be issued on or about 28 December 1959 reflecting this agreement.

(G) A requirement for a study of the solid particles present in the Minuteman engine exhaust has been generated by the Minuteman Office. Stanford Research Institute (SRI) will conduct the study as an addition to Contract AF 04(647)-221. SRI will participate in ten Minuteman engine test firings in conducting the study. SRI's proposal for the study has been requested. Informal estimate for the six-week study is \$10,000. Contractual action for the study should be completed by 31 January 1960 and the Contractor should complete the study during March 1960.

(U) A requirement from WDTT for eight United ElectroDynamics (UED) telemetry systems for SAMOS has been received. In addition, a requirement exists for eight telemetry systems for ATLAS. IBZSP will solicit a proposal from UED for sixteen systems on or about 23 December 1959. This requirement will be added by supplement to the existing Contract AF 04(647)-202. Completion of contractual action by 15 February 1960 is estimated and delivery of the systems during August 1960 is scheduled.



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(U) Long Range Valve R&D Program

A follow-on effort for a series of tests on the solenoid valve developed under Contract AF 04(647)-160 with Rocketdyne Division of North American Aviation is being negotiated. Rocketdyne proposed a cost of \$14,000 with two months to complete. We anticipate completion of contractual coverage by 15 February 1960, therefore, tests should be completed by 15 April 1960.

(U) LOX Pumps

Byron-Jackson (Contract AF 04(647)-223) encountered difficulties in installing their LOX pumps at Edwards AFB. However, their problems have been resolved and they will complete their testing of the pump by 31 December 1959. This thirty-day slippage is not expected to jeopardize the program. The LOX pump developed by Aerojet (Contract AF 04(647)-224) is scheduled for testing as soon as possible after completion of testing on the Byron-Jackson pump.

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WEEKLY DIARY ITEMS - LBZSA

10 December Thru 16 December 1959

(U) Letter Contract AF 04(647)-449 with Aeronutronics - Program 609A .

System 609A has money problems which affect both this contract and the NASA Intergovernmental Delivery Orders to purchase GFP for this contract. There is doubt that Headquarters USAF will release additional money for the 609A Program. Since Aeronutronics will run out of money about 1 January 1960, expeditious action must be taken to insure that no commitments are made by the Contractor to obligate himself for any amount in excess of the money now on the Letter Contract. To this end, we have instructed the Contractor and his ACO to award no additional subcontracts until this money problem is resolved.

(U) Contract AF 04(647)-476 with General Electric - Communications Satellite

The possible cancellation of Project Steer (mentioned in last week's Diary) is still being discussed. In this interim, we have instructed GE (and the ACO) to curtail outside commitments to a bare minimum while the fate of the program is being decided. The rate of expenditure to "keep alive" in this state of suspended animation is \$200,000 per month, whereas the normal expenditure rate to meet contract schedules is close to \$600,000 per month. Of course there will come a time in the near future when we will either lift the ban on subcontracts/purchase orders or suffer the consequences of schedule slippages.

(U) Contract AF 04(647)-361 with STL - Tiros, Transit and Courier Projects

1. On 1 December STL proposed a price of \$6.8 million for the definitization of Amendment 2 (SE/TD for Communication Satellite only) to L/C AF 04(647)-361. Their proposal contained a level-of-effort considerably in excess of our written instructions to them, so we have asked them for a revised proposal that conforms to the effort we want to buy. In addition, their proposal was deficient in back-up information. The effect of this perturbation on the definitization of the contract is not yet known.

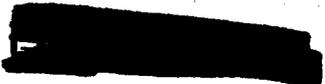
(G) 2. Courier I-A and I-B, under ARPA Order Nr. 98 Project Code Nr. 2200, for delivery and launch of two Thor-Able-Star vehicles are proceeding according to program plan. Courier I-A schedule is firm for 15 May 1960 launch from Atlantic Missile Range into a 650 Nautical Mile High Orbit. Design and/or fabrication is approved for all hardware and ground support equipment with system tests scheduled to start 14 February 1960. The Courier I-B second stage engine Contractor (Aerojet-General) has been selected. Technical problems discovered late in the second stage engine testing program have been resolved and no further vehicle delay is anticipated.

(G) 3. Transit I-A, I-B, 2-A and 2-B, under ARPA Order Nr. 97, Project Code Nr. 2300, provides one Thor-Able and three Thor-Able Star for launching into Circular Orbit. Transit I-A was launched 15 September 1959, was only partially

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successful and will have final launch report this month. Transit I-B has received a schedule delay to 15 March 1960 due to lack of ARPA funds to complete ground equipment requirements. Technical difficulties with the Able-Star Stage also created delay. The Transit 2-A is now scheduled for launch on 15 April 1960. Transit 2-B is now implemented by choice of a second stage contractor and establishment of a production schedule.

(e) Contract AF 04(647)-302 with STL - Able 3 and 4

1. This project is designed to accomplish a deep space probe by launching a vehicle several million miles into space to the vicinity of the orbit of Venus. The payload of this vehicle is designed to become a permanent solar system body orbiting near the orbit of Venus and Earth.
2. The original launch date for this probe was 15 December 1959 but was not accomplished due to technical difficulties during payload check out. Further payload check out will be accomplished by STL at Los Angeles with the flight schedule now planned for mid-January 1960.